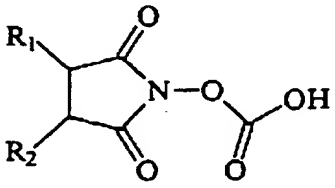
4. (Amended) The process according to Claim 1, wherein the activating reagent is derived from a compound of the following structure (I)

A42



(I)

where R_1 and R_2 are identical or different and are straight-chain, branched-chain or bridged to give a carbocycle or a heterocycle and are selected such that the activating reagent or the derivative of the activating reagent can be reacted in homogeneous phase with the polymer having at least one functional group.

5. (Amended) The process according to Claim 1, wherein the functional group of the polymer having at least one functional group is an OH group, an NHR_{11} group, an SH group, an OSO_3H group, an SO_3H group, an OPO_3H_2 group, an OPO_3HR_{11} group, a PO_3H_2 group, a PO_3HR_{11} group, a COOH group or a mixture of two or more of these groups, where R_{11} is in each case selected such that the activating reagent or the derivative of the activating reagent can be reacted in a homogeneous phase with the polymer having at least one functional group.

6. (Amended) A derivative of a polymer having at least one functional group, preparable by a process which comprises reacting the polymer having at least one functional group, with an activating reagent or a derivative of an activating reagent in a homogeneous phase.

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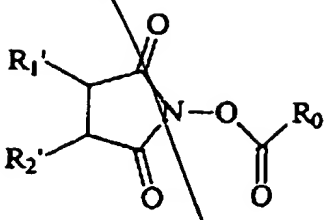
9. (Amended) A process for the bonding of at least one substrate to at least one receptor group via non-covalent receptor-substrate interaction, wherein a compound employed having at least one receptor group is a derivative of a polymer having at least one functional group, wherein said derivative of a polymer having at least one functional group is prepared by a process according to Claim 1.

A43

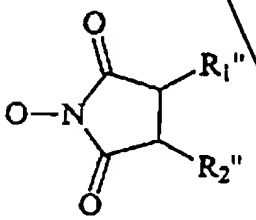
10. (Amended) A compound of the general structure (X)



(X)

A43

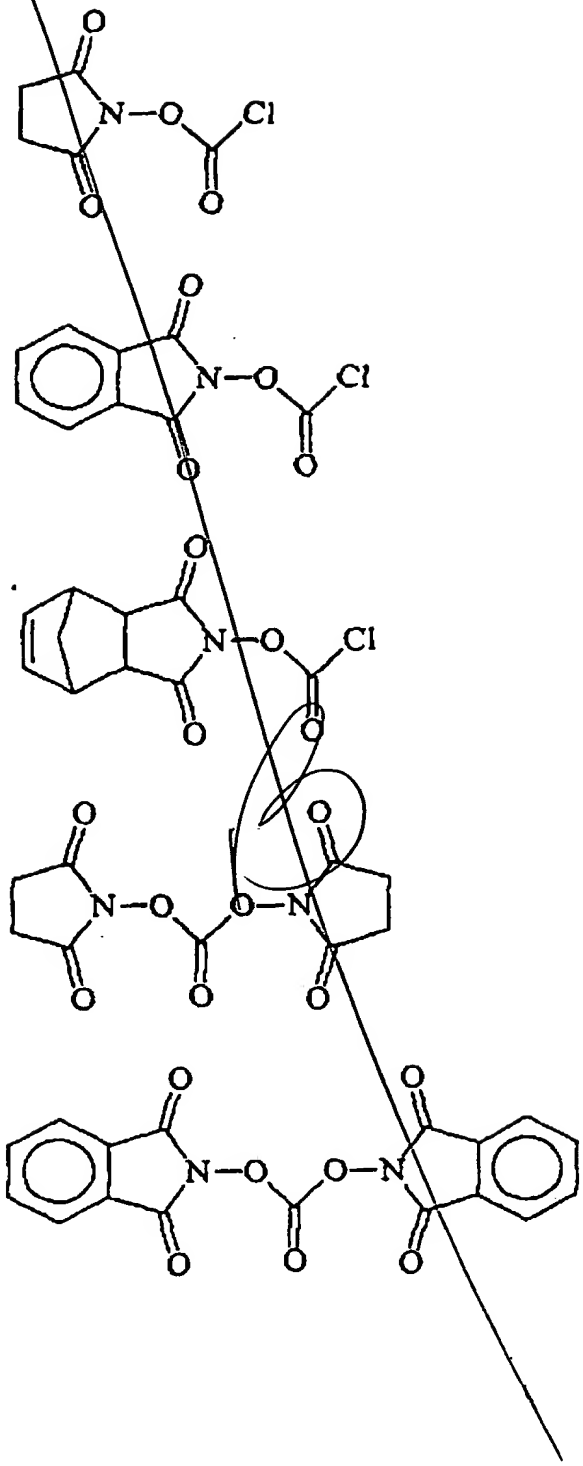
wherein R_0 is a halogen atom or a radical of the structure (X')



(X')

and R_1', R_2', R_1" and R_2" are identical or different and are hydrogen, straight-chain or branched-chain alkyl, aryl, cycloalkyl, heterocyclic or aralkyl radicals having up to 30 C atoms, or either R_1' and R_2' or R_1" and R_2" or both R_1' and R_2' and R_1" and R_2" are linked to at least one carbocycle or to at least one heterocycle or to at least one carbocycle and to at least one heterocycle, compounds of the following structures (X_1) to (X_7) being excluded:

A43



(X_1)

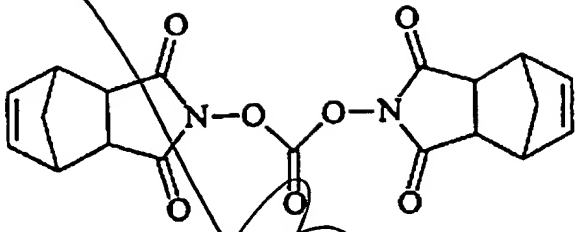
(X_2)

(X_3)

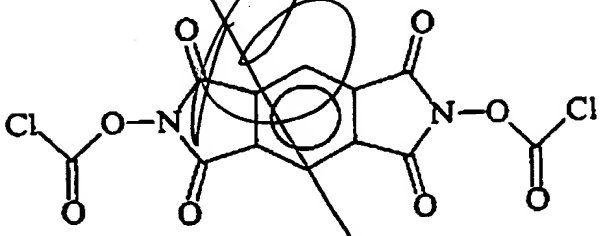
(X_4)

(X_5)

A43



(X6)



(X7)

Please add the following new claims:

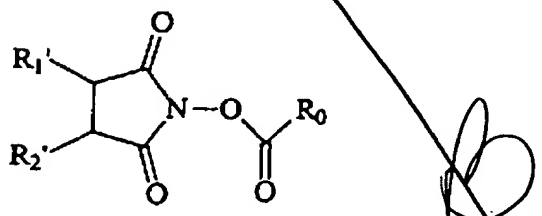
11. (New) A derivative of a polymer having at least three functional groups, obtainable by a process as claimed in claim 1, wherein at least two of the functional groups are derivatized in such a way that they interact with a suitable substrate as receptor groups and at least one functional group having non-substrate-specific action and/or a monomer unit without a functional group lies between two of the said derivatized groups.

A44

12. (New) A derivative of a polymer having at least one functional group, obtainable by a process as claimed in claim 1, which acts as a receptor for binding of at least one substrate via a non-covalent receptor-substrate interaction, wherein the binding of the at least one substrate can take place via at least two different types of interactions on account of chemical constitution of the receptor groups.

13. (New) A process for the bonding of at least one substrate to at least one receptor group via non-covalent receptor-substrate interaction, wherein the compound employed having at least one receptor group is a derivative of a polymer having at least one functional group according to Claims 6.

14. (New) A compound of the general structure (X)

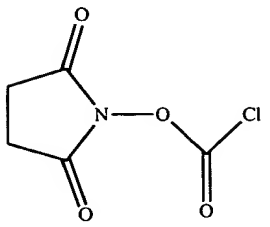


(X)

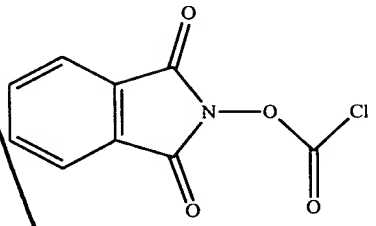
wherein R_0 is a halogen atom and wherein R_1', R_2' are identical or different and are hydrogen, straight-chain or branched-chain alkyl, aryl, cycloalkyl, heterocyclic or aralkyl radicals having up to 30 C atoms, or R_1' and R_2' are linked to at least one carbocycle or to at least one heterocycle or to at least one carbocycle and

to at least one heterocycle, compounds of the following structures (X_1) to (X_3) and (X_7) being excluded:

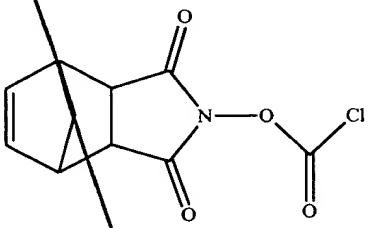
A44



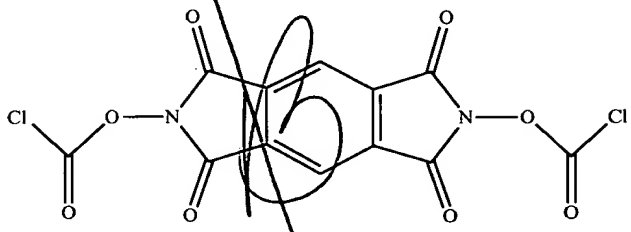
(X_1)



(X_2)

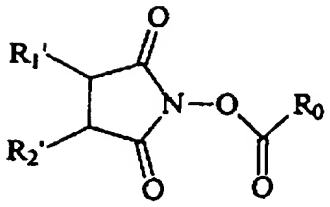


(X_3)



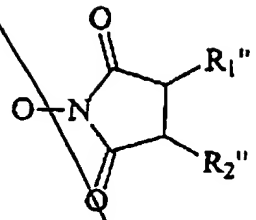
(X_7)

15. (New) A compound of the general structure (X)



(X)

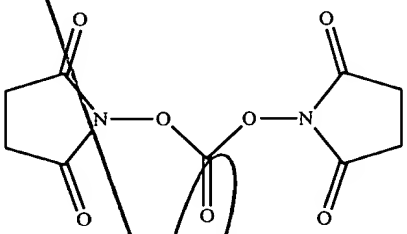
wherein R_0 is a radical of the structure (X')



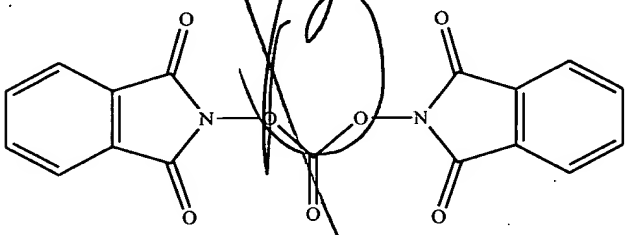
(X')

A44

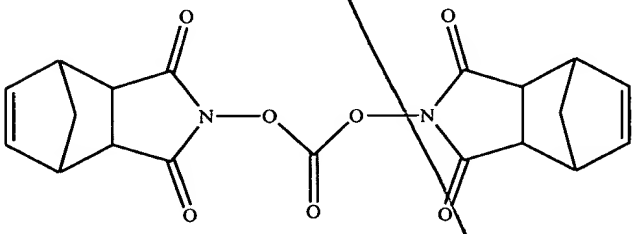
and wherein R_1', R_2', R_1" and R_2" are identical or different and are hydrogen, straight-chain or branched-chain alkyl, aryl, cycloalkyl, heterocyclic or aralkyl radicals having up to 30 C atoms, or either R_1' and R_2' or R_1" and R_2" or both R_1' and R_2' and R_1" and R_2" are linked to at least one carbocycle or to at least one heterocycle or to at least one carbocycle and to at least one heterocycle, compounds of the following structures (X_4) to (X_6) being excluded:



(X_4)



(X_5)



(X_6)